IN THE CLAIMS

1. (Original) A thermal transfer interface, comprising:

a thermal spreader forming a plurality of passageways;

a spring element coupled with the spreader; and

a plurality of thermally conductive pins for the passageways, each of the pins having a head and a shaft moving with the spring element, at least part of the shaft being internal to the passageway and forming a gap with an internal surface of the passageway, wherein the pin heads collectively and macroscopically conform to an object coupled thereto to transfer heat from the object to the spreader through the passageway gap formed between the spreader and each of the plurality of pins.

2. (Original) An interface of claim 1, the spring element forming a layer with a substantially planar face, each of the pin heads being substantially flush with the face.

3. (Original) An interface of claim 1, the spring element forming a layer with a substantially planar face, each of the pin heads recessed within the spring element.

4. (Original) An interface of claim 1, the spring element formed of non-conductive material and forming one or more apertures for thermal energy transfer between the object and the pin heads.

5. (Original) An interface of claim 1, the spreader comprising a ventilated metal block.

6. (Original) An interface of claim 1, the spring element comprising a plurality of springs disposed with the passageways for biasing the pins outwardly from the spreader towards the object.

7. (Original) An interface of claim 1, the spring element comprising a plurality of springs disposed between the pin heads and the spreader for biasing the pins outwardly from the spreader towards the object.

8. (Original) An interface of claim 6, each of the pins forming a shoulder, and further comprising a retaining element for abutting the shoulder in defining a maximal extension of pins.

9. (Original) An interface of claim 7, each of the pins forming a shoulder, and further comprising a retaining element for abutting the shoulder in defining a maximal extension of pins.

10. (Original) An interface of claim 1, the thermal spreader comprising at least one vent coupled with at least one of the passageways, to vent pressure from the one passageway.

11. (Original) An interface of claim 1, one or more of the pin shafts having non-cylindrical shape, each of the passageways having a substantially matched non-cylindrical shape to accommodate motion of the shafts therethrough.

12. (Original) An interface of claim 1, the pin heads arranged in a geometric pattern that covers an area extending beyond a region of contact between the pin heads and the object.

13. (Original) An interface of claim 1, further comprising thermal grease disposed within the gap.

14. (Original) An interface of claim 1, the object comprising a semiconductor die.

15. (Original) An interface of claim 1, the object comprising a plurality of dies, wherein a first set of the pins contact the plurality of dies, and wherein a second set of pins do not contact the dies.

16. (Original) A method for transferring thermal energy from a body to a heat sink, comprising the steps of: biasing a plurality of pins against a surface of the object so that the plurality of pins contact with, and substantially conform to, a macroscopic surface of the object, and communicating thermal energy from the object through the pins to a thermal spreader forming a plurality of gaps with the plurality of pins.

17. (Original) A method of claim 16, the step of biasing comprising biasing a plurality of pin heads against the object utilizing a plurality of springs.

18. (Original) A method of claim 16, the step of biasing comprising utilizing a spring element formed of thermally conductive material with a substantially planar face, each of the pin heads being substantially flush with the face.

19. (Original) A method of claim 16, the step of biasing comprising utilizing a spring element formed of thermally conductive material with a substantially planar face, each of the pin heads recessed within the spring element.

20. (Original) A method of claim 16, the step of biasing comprising utilizing a plurality of springs disposed between pin heads of the pins and the spreader.

21. (Original) A method of claim 16, further comprising utilizing a thermal spreader having at least one vent coupled with at least one passageway through the thermal spreader, to vent pressure from the passageway.

22. (Original) A method of claim 16, the step of biasing comprising utilizing pins with non-cylindrical shape.

23. (Original) A method of claim 16, further comprising the step of disposing thermal grease within the gap.

24. (Original) A method of claim 16, the object comprising a semiconductor die.

25. (New) A thermal transfer interface, comprising:

a thermal spreader forming a plurality of passageways and one or more vents;

a spring element coupled with the spreader;

a plurality of thermally conductive pins for the passageways, each of the pins having a head and a shaft moving with the spring element, at least part of the shaft being internal to the passageway and forming a gap with an internal surface of the passageway, wherein the pin heads collectively and macroscopically conform to an object coupled thereto to transfer

heat from the object to the spreader through the passageway gap formed between the spreader and each of the plurality of pins, one or more of the pins forming a shoulder; and

a retaining element for abutting the shoulder in defining a maximal extension of pins.